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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/306,006	05/06/1999	ANDREAS WERNER SUPERSAXO	NB/2-21551/A	2914

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EXAMINER
SHAREREH, SHAHNAM J

ART UNIT.	PAPER NUMBER
1617	38

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/306,006	Applicant(s) SUPERSAXO ET AL.	
	Examiner Shahnam Sharareh	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/27/2003, 6/6/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,6,15-21,28 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2, 6, 15-21, 28-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Continu d Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 27, 2003 and June 26, 2003 has been entered.

Claims 2, 6, 15-21, 28-29 are pending in this application. Claims 28 and 29 are independent claims. Applicant has indicated that claim 24 is still pending, however, page 3 of the amendment indicates that claim 24 has been canceled. Clarification is requested.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use. The instant application does not appear to follow the suggested layout as it does not contain the subheadings (e)-(h).

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)),

and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

Priority

If applicant desires priority under 35 U.S.C. 119 (e) based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. _____" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 6, 15-21, 28-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 depends on claim 28 and is directed to formulations in the form of a semi liquid or solid preparations. However, claim 28 is directe to methods of preparing formulations in an aqueous nanodispersion. Thus, it is not clear how an aqueous nanodispersion can be in the form of a semiliquid or solid. Thus, the scope of the claim is not clear.

Claim 17 depends on claim 29 and is directed to tablet formulations. However, claim 29 is directed to an aqueous nanodispersion. Accordingly, it is not clear how a tablet formulation can comprise aqueous nanodispersions.

Claims 28 and 29 are directed to compositions that are “highly homogenous.” The term "highly homogenous" in claims 28 and 29 is a relative term which renders the claim indefinite. The term "highly homogenous" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Applicant is suggested to make a specify a quantifiable measurement of homogeneity in order to substantiate the term “highly homogenous.”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 6, 15-21, 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yiv et al US Patent 6,245,349 in view of Weder WO 96/37192.

The instant claims are directed to aqueous nanodispersion formulations and methods of preparing them wherein the formulations consisting essentially of (a) 0.1-30% by weight of phospholipid (b) 1-50% by weight of polyoxyethylene co emulsifier (c) 0.1-80% by weight of a liphophilic component which comprise a natural or synthetic or a partially synthetic C_4- C_{18} triglyceride and a lipophilic active agent in which aqueous

nanodispersion, any pharmaceutically active agent is lipophilic and the active agent is always present in component (c), (d) 0.63-1.42% by weight ethanol, wherein the sum of (a), (b), (c) and (d) is 100% weight, and the formulation further contains a water phase.

Yiv et al disclose drug delivery compositions comprising particles having a size below about 50 nm diameter, and further comprising a lipophilic drug, a phospholipid (Centrophase 31), a polyoxyethylene co emulsifier (Tween 80 which is polyoxyethylene (20) sorbitan monoloeate), and a lipophilic component comprising triglycerides or propylene glycol diester oils having C_6 to C_{14} for the total of 100% weight. Yiv's compositions can further be diluted with water to form an o/w emulsion (see col 5, lines 5-10, 50-65; col 6, lines 5-20, 38-65; col 9, lines 10, lines 14-60, tables1.3, 3.1, 5.1; col 15-16, claims 1-8). The concentrations of each of Yiv's components falls within the instantly claimed ranges (see tables 1.3, 3.1, 5.1; claims 1-8). Yiv uses methods which do not need for high shear mixing equipments (see col 8, lines 20-28, col 10, lines 15-25). Gaussian distribution is construed as meaning normal distribution of particles in the final formulation. Yiv's method provides an average particle size distribution of 100nm. Therefore, it follows a normal distribution because it contains an average measurement. Yiv further teaches that lower alcohols such as ethanol may be used in his compositions (col 7, lines 10-14). However, Yiv fails to specifically disclose a compositions containing ethanol.

'192 patent primarily teaches similar type of nanodispersion compositions comprising phospholipid, polyoxyethylene, a lipophilic component, ethanol, a triglyceride, and a therapeutic agent. '192 also provides that the use of triglycerides

improves stability and solubility of lipophilic drug in an aqueous emulsion system is conventional (see entire document, claims 1-5). '192 further teaches that it is well within purview of an ordinary skill in the art to select a suitable carrier system for the intended pharmaceutical and cosmetic use. '192 patents are directed to not only parenteral but also cosmetic compositions, (see page 27, claims 1, 3-4). Accordingly, using ethanol to form an aqueous dispersion is conventional and dependent on the utility of the formulation (see page 13, 19-23).

Even though Yiv fails to use ethanol in his composition it would have been obvious to one of ordinary skill in the art at the time of invention to add ethanol into Yiv's carrier system as suggested by Yiv itself and as taught by '192, because the ordinary skill in the art would have had a reasonable expectation of success to enhance the delivery of Yiv's active agent to specific tissues; such as dermal tissue, when adding adequate amount of ethanol to Yiv's carrier system, because as taught by '192 use of ethanol improves topical application of the nanodispersion shown by Yiv.

Response to Arguments

Applicant's arguments with filed on June 26, 2003 have been fully considered but are not persuasive.

Applicant argues that the HLB of the surfactant used by Yiv is higher than 15 which is outside the scope of the instant claims. In response Examiner states that Applicant argues unclaimed limitations. Therefore, the argument is not commensurate with the scope of the claims, as the pending claims do not exclude the surfactants used by Yiv.

Applicant argues that '192 uses sphingolipids which are not used in the instant claims. Applicant also argues that ethanol used in '192 is an optional excipient, not an essential component. In response Examiner states that Yiv is used as the primary reference in the rejection under question. Yiv does not use sphingolipids in his compositions. Therefore, the use of sphinolipids in '192 is not relevant, because '192 is merely used to show conventional use of ethanol in nanodispersion delivery systems. Moreover, Yiv specifically teaches the use of lower alcohols such as ethanol in his composition (col 7, lines 10-14) regardless of its essentiality. Thus, absence of showing unexpected results the ordinary artisan would have had a reasonable expectation of success to use ethanol when suitable. This modification of Yiv's compositions would have been well within the ordinary skill of the artisan, specially since the teachings of '192 provides reasonable expectation of success for the ordinary artisan when ethanol is used as the solvent.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahnam Sharareh whose telephone number is 703-306-5400. The examiner can normally be reached on 8:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan, PhD can be reached on 703-308-1877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1123.

SS 11/10/2003

RUSSELL TRAVERS
PRIMARY EXAMINER
GROUP 1200